

Amendments to the Claims

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A method for controlling the slew rate of a signal driven by a signal driver characterized by an output impedance onto a transmission line of an integrated circuit device, comprising:

determining a desired slew rate for said signal;

calculating characteristic capacitance which together with said signal driver output impedance will produce a resulting time constant on said transmission line to achieve said desired slew rate;

calculating an interconnection path characterized by a redistribution metal characteristic capacitance substantially equal to said calculated characteristic capacitance;

connecting said signal driver to a first end of said interconnection path; and

connecting said transmission line to said second end of said interconnection path.

2. (Currently Amended) A method in accordance with claim 1, wherein:

said characteristic capacitance is selected such that for a desired 95% full signal transition time t , t is approximately equal to $3 \cdot R_O \cdot C_{RM}$, where R_O comprises said signal driver output impedance resistance and C_{RM} comprises said characteristic capacitance.

3. (Withdrawn) An integrated circuit device, comprising:
a signal driver which drives a signal onto a transmission line;
redistribution metal connecting said signal driver to said transmission line, said redistribution metal characterized by a capacitance which causes a

desired slew rate on said transmission line when said signal transitions from a first state to a second state.

4. (Withdrawn) An integrated circuit device in accordance with claim 3, wherein:

said characteristic capacitance comprises a value C_{RM} such that for a desired 95% full signal transition time t , t is approximately equal to $3 \cdot R_O \cdot C_{RM}$, where R_O comprises said signal driver output resistance.

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5. (Withdrawn) A method for mapping a signal driver of an integrated circuit to one of a plurality of interconnect pads, comprising:
determining an output impedance of said signal driver;
determining a desired slew rate for a signal generated by said signal driver;

calculating a desired characteristic capacitance, said desired characteristic capacitance having a capacitance value which together with said output impedance of said signal driver will provide a resulting characteristic time constant required to achieve said desired slew rate on a transmission line connected to receive said signal;

calculating at least one possible interconnection path to each said plurality of interconnect pads;

estimating a characteristic capacitance associated with each said at least one possible interconnection paths;

selecting one of said possible interconnection path whose associated characteristic capacitance is substantially equal to said desired characteristic capacitance; and

mapping said output driver to said interconnection pad associated with said selected interconnection path.

6. (Withdrawn) A method in accordance with claim 5, comprising:
connecting said signal driver to a first end of said selected

interconnection path; and

connecting said interconnection pad to a second of said selected interconnection path.

7. (Withdrawn) A method in accordance with claim 5, wherein:
said desired characteristic capacitance is selected such that for a desired 95% full signal transition time t , t is approximately equal to $3 \cdot R_O \cdot C_{RM}$, where R_O comprises said signal driver output resistance and C_{RM} comprises said characteristic capacitance.

A 8. (New) A method in accordance with claim 1, comprising:
connecting said signal driver to a first end of said interconnection path; and
connecting said transmission line to a second end of said interconnection path.

9. (New) A method in accordance with claim 2, comprising:
connecting said signal driver to a first end of said interconnection path; and
connecting said transmission line to a second end of said interconnection path.

10. (New) An integrated circuit, said integrated circuit comprising:
a transmission line;
a signal driver characterized by an output impedance which drives a signal onto a transmission line; and
redistribution metal connecting said signal driver to said transmission line, said redistribution metal selected to be characterized by a redistribution metal characteristic capacitance that is determined by calculating said redistribution metal characteristic capacitance which together with said signal driver output impedance will produce a resulting time constant on said

transmission line to achieve a desired slew rate on said transmission line when said signal transitions from a first state to a second state.

11. (New) An integrated circuit device in accordance with claim 10, wherein:

said redistribution metal characteristic capacitance comprises a value C_{RM} such that for a desired 95% full signal transition time t , t is approximately equal to $3 \cdot R_O \cdot C_{RM}$, where R_O comprises said signal driver output impedance.
